to the Colony for various causes. By 1922 there were 22 girls' colonies in active operation, paying their way and standing very highly in their respective communities. There are also a few industrial colonies from which the girls go out to factory work in groups, and it is found that they are by no means the first to be turned off when work is slack. Between 1914—1921 573 girls have been drafted to colonies and the records are surprisingly good, only 86 having been returned to the institution for bad behaviour or further training. Out of a total of 49 children born to discharged girls, only 8 were illegitimate. Though there are no statistics as to the mentality of the offspring, it is possible that the same result would be shown as in Dr. Fernald's after-care study of a similar group from Waverley, in which he found that the majority of the children appeared to be normal.

The Colony plan was evolved primarily with the object of releasing beds in the parent institution for urgent cases, and judging by this review the experiment has already justified itself. The domestic workers' colonies might well be imitated in this country, where there are already a very large number of defectives in service. The very fact that a defective is attached to such a colony acts as a safeguard, and the danger of assault and bad treatment are reduced to a minimum. Also the knowledge that inefficiecy and bad conduct will inevitably mean a return to the institution, is in itself a very strong incentive to keep straight.

These two systems have made it possible to care for a very much larger number of defectives without very great additional cost, and as such merit consideration. It is manifestly impossible to provide life segregation for the estimated numbers of defectives in the community, and the realization that all defectives are not necessarily either immoral, delinquent or unemployable, should make it possible for these more elastic systems to be adopted, keeping life segregation for the very definitely hereditable types. E.I.C.

Elliot-Smith, Grafton. *The Evolution of Man ; Essays.* London, 1924. Humphrey Milford. Oxford University Press. Pp. 154. Price 8/6.

A volume of essays from the pen of a professor on a subject in which he is a master must excite the keenest interest and anticipation of enlightenment, and Professor Elliot-Smith does not disappoint us. What is perhaps most remarkable in the book is that "he dares to be commonplace." That man is descended from a creature allied to the higher tail-less apes, that these are in turn descended from the tailed forms, and that the lower apes are derived through that weird spectacled lemur Tarsius from the lower lemurs, that finaly the lower lemurs are the offspring of tree-haunting insectivores like the tree-shrews of Java, and that ultimately the line goes back to opposum-like marsupials ; these are conclusions which have been taught to zoological students for the last thirty years ; and it is a heartening thing to discover that the most profound anatomical criticism of the twentieth century supports them.

Perhaps not all the readers of the *Eugenics Review* who are acquainted with Professor Elliot-Smith as an Egyptologist and

Anthropologist know of the field in which his reputation as a scientist was first built up. This was the comparative anatomy of the vertebrate brain. The structure of the human brain and the delimitation of the cortical areas devoted to the carrying out of special functions had been elucidated by the labours of Head, Sherrington and Ferrier; what Elliot-Smith did was to go back along the vertebrate line and trace the first origin of these areas. When he did this he discovered that the feature which above all others distinguished apes from insectivores was the increase in size and importance of the visual area : that is to say that it was an intensification of the habit of *using the eyes* which led to the evolution of the Apes. This habit was necessitated by the fact that they had taken to life in the trees. It will come as a surprise to most of our readers that the Apes are the only creatures besides ourselves which can accurately focus both eyes on the same object, in a word, perceive clearly. Most mammals are guided mainly by their noses and see only vaguely, as is well-known to horse-lovers, who have seen their favourites "shy" at such objects as a piece of paper in the road. The further evolution of the Ape into Man was accomplished by a greater development of the power to learn from experience—in a word, of the growth of memory, with which was associated a growth in the areas of the brain surrounding the primary centres for vision and hearing. These, often termed the areas for psychic vision and speech, are distinctively human. The point which we wish to stress is this, that Elliot-Smith throughout this work assumes that it was not the occurrence of "accidental variations" and their preservation that produced evolution, but the pressure of environmental necessity which forced the ancestors of man to modify their habits, to strive more eagerly with their senses, and so improve them. In a word *change of habit precedes and causes evolution.*

What the "pressure of environment" consisted in Elliot-Smith does not leave us in doubt. After considering all the evidence he fixes the region of Man's evolution amongst the forests of Miocene Asia. These forests, which occupied the place now taken up by the Himalayas, were tenanted by a great variety of Anthropoid Apes, and it was the gradual destruction of these forests which forced the apes to take to a ground-life and to develop into men.

Man from his very beginning was a wanderer. The most ancient types of flint instruments, the Chellean and Acheulian, have an almost identical form wherever found, whether it be in France or in the Cape of Good Hope. The only rational explanation of these facts, as Elliot-Smith insists, is the handing on of arts from tribe to tribe by the process of migration. An independent evolution of absolutely identical forms in different areas is an assumption so opposed to experience that it will not stand critical examination. Mankind, however, now is sharply divided into different races, and the evolution of these races must have demanded for its completion long periods of isolation of various groups of humanity from one another. One of the most ingenious of Elliot-Smith's speculations is that this isolation was caused by the latest or "Wurmian" Ice-age, the huge ice-fields of which locked up tribes of men in relatively limited areas from which

they could not emerge ; when these ice-fields melted, a process which was not completed until 7,000 years ago, an age of migration and of race-mixture supervened which still continues.

To deal fully, however, with this most interesting book would occupy more space than is available in this magazine. We need only note, in concluding, that the whole work is regarded by its author as a preliminary sketch of a more complete treatise which he hopes eventually to publish. That the date of its publication may not be unduly postponed is a wish that will be shared by all the readers of the present book.

E. W. MacBride.

Fisher, The Right Hon. Herbert, M.P., F.B.A., F.R.S., LL.D. *The Common Weal.* Oxford, Clarendon Press. 1924. Pp. 296. 7s. 6d. net.

The plan of the author, in these twelve lectures—delivered under the Stevenson Trust to the University and City of Glasgow—was to allow his "thoughts to play freely and discursively round some of the topics" connected with the subject of Citizenship; and his purpose was evidently to present in each case a balanced, impartial and judicial statement. Now, no one can deny the merit of impartiality; but it is equally undeniable that extreme anxiety to avoid taking a side is apt to result in ambiguity and flabbiness in the conclusions. Some such weakness we seem to detect in the seventh lecture, "The Claims of Race," in which the author seeks to balance the accounts between heredity and environment. There is clear recognition of the importance of Eugenics to social welfare and of the part played by heredity in the improvement or deterioration of racial quality. But there is a tendency to qualify conclusions so that they lose much of their force. For instance, in commenting upon the amazing precocity of Mozart's genius and his musical ancestry, the author concludes: "And yet can we be sure what would have happened if Mozart's father had received no musical education, or if the sensitive child . . . . had been transported in infancy to a rude log hut in the Canadian prairie far from musical instruments and musical thought . . . . Even in Mozart's case we cannot affirm with certainty that environment did not count for much."

In this rather meticulous proviso we note a tendency common to politicians and educationists, whose activities are exclusively concerned with the control of the human environment; the tendency to approach the phenomena of heredity in a spirit of severe scepticism while accepting the alleged influences of the environment with easy credulity. Little account seems to be taken of the commonness of a musical environment and the rarity of musical genius.

There is also a tendency to exaggerate our ignorance. "The laws which govern the emergence of genius . . . still remain in the darkest obscurity. We do not know how to breed genius." But the aim of modern Eugenics is not to breed genius. It is to eliminate the defective. And with this aim the author is in full sympathy. If he is disposed to limit the operation of eugenic methods to the grossly unfit and abnormal, he at least emphasizes the need for action within